

REMARKS

Claims 1-20 are pending in this application.

Applicants request reconsideration of the pending claims in light of the following remarks.

Claim Rejection under 35 U.S.C. 103

Claims 1-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,596,599 to Guo et al (hereinafter Guo) in view of U.S. Patent No. 6,803,624 to Rudeck et al (hereinafter Rudeck).

Specifically, the March 23, 2005 Office Action (hereinafter Office Action) urged that Guo discloses a process of forming an LDD device and the LDD device including forming a gate insulating film and a gate electrode film, patterning the gate electrode, undercutting the region beneath the gate electrode, and forming oxide side wall spacers on the gate structure, and forming source and drain regions, wherein the gate has a silicon film, a refractory metal film and nitride film, also disclosed is forming a nitride spacer on the oxide spacer and implanting (see figs. 2-12 and related text). (Office Action at page 2).

The Office Action correctly noted that Guo does not disclose forming the oxide spacer by using a silicon layer and oxidizing the silicon layer to form the spacer. (see, Office Action at page 2)

The Office Action urged that Rudeck teaches forming silicon layer 52 which can be oxidized to form a sidewall spacer in an LDD device. (see, Office Action at page 2).

Based on the above premises, the Office Action urged that it would have been obvious to one of ordinary skill in the art to use the spacer of Rudeck in the method of Guo, because it allows for control of formation of the spacer. (see, Office Action at page 2).

Applicants respectfully traverse this rejection.

The motivation to modify the prior art must flow from some teaching in the art that suggest the desirability or incentive to make the modification needed to arrive at the claimed invention. There is no such teaching in Guo.

In particular, Guo discloses undercutting the lower electrode of the gate which is made from the stacked layer of a lower electrode and an upper electrode, not any portion of a gate insulating film. (see, Guo, Fig. 5 and col. 8, lines 13-18). Thus, Guo does not teach or suggest

applicants' claims 1, 9 and 15, *inter alia*, removing a portion of the gate insulating film to form an undercut region beneath the gate electrode; and claim 18, *inter alia*, a gate electrode formed over the substrate, the gate electrode including a gate insulating film, a portion of the gate insulating film being removed to form an undercut region beneath the gate electrode.

Rudeck does not cure the deficiencies in Guo to come up with amended claims 1, 9, 15 and 18 of the present invention. As noted above, Rudeck is cited for teaching forming silicon layer 52 which can be oxidized to form a sidewall spacer in an LDD device. However, there is no teaching or suggestion in Rudeck for applicants' claims 1, 9 and 15, *inter alia*, removing a portion of the gate insulating film to form an undercut region beneath the gate electrode; and claim 18, *inter alia*, a gate electrode formed over the substrate, the gate electrode including a gate insulating film, a portion of the gate insulating film being removed to form an undercut region beneath the gate electrode. In fact, Rudeck does not disclose forming an undercut region at all.

For at least these reason, amended claims 1, 9, 15, and 18 are patentable under 35 U.S.C. §103(a) over Guo in view of Rudeck. Applicants respectfully request reconsideration and withdrawal of the rejection to claims 1, 9, 15 and 18, and claims 2-8, 10-14, 16-17 and 19-20 depended respectively therefrom.

In summary, applicants respectfully submit that the instant application is in condition for allowance. Early notice to that end is earnestly solicited.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicants request that the undersigned be contacted at the number below.

Respectfully submitted,



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